HEALTH

EDITED BY

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Contents of No. 50.

	PAGE
Notes by the Way	385
Original Essays:—	
The Medical Uses of Hot Water. By Dr. Andrew Wilson	386
Disease Germs and Their Relations. II. By Dr. H. Fol	387
Examinations, Schools, & Health. III. By G. G. Chisholm	387
Personal Health:—	
Origin of Indigestion. I.	389
The Family Circle:—	
Economical Breakfasts, Dinners, and Suppers. III. By Mrs. Thwaites	391
A Female Teacher's Statement of her Work, and its Effects	392
Girl Gymnasts	392
Healthy Houses:—	
Houses-Heating Appliances. IV. By Professor Trowbridge	393
Our Bookshelf	394
International Health Exhibition	395
Sanitary Appliances, &c.:—	
Chloralum	396
Our Letter-Box:—	
General	397
Sanitary	397
Medical	397

Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

Returning to the question we recently discussed in our "Notes" (see Health, No. 48), "Can artificial injuries be transmitted to offspring?" we have received a considerable number of replies to our request for illustrative examples which might be known to our readers. Many of these examples have been derived from "hearsay" evidence, and the writers frankly say, in most cases, that they cannot vouch for the absolute correctness of the statements they forward. In other cases, the recital of personal experiences given by correspondents is defective, regarded merely from the point of view of scientific evidence. A few cases only satisfy the requirements of the scientific inquirer, and one or two of those cases we may quote for our readers' instruction.

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One correspondent gives the following particulars:—When thirty-three years of age, he received an injury in the upper part of the left ear, splitting the ear completely in two. It was surgically dressed, but naturally left a scar; a very decided *notch* remaining in the injured part. Four years after the accident our correspondent married. The first child of the marriage was a daughter, and this child presented on her left ear a *notch* exactly resembling that artificially produced in her father. None of the children subsequently born exhibited any such mark. In this case, therefore, there is the clearest evidence of an inherited injury. Another correspondent tells us of a case in which the male child of a relative was born with the mark of a scar on his neck, this scar corresponding to one which the father exhibited as the result of an injury received six or seven years before the child was born. A third writer recounts the presence in a female child of a deformed little finger, which corresponded to such a finger artificially produced in the father—the hand, however, which bore the deformity in the child being the left, while the injured hand of the father was the right. From these examples alone, it appears quite certain that the question "Can artificial deformities be transmitted?" must be answered in the affirmative.

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This topic opens up before us a very interesting study in "inheritances" and in the laws of the science of "heredity." A vast amount of observation and reasoning is required, before the influence of parentage on offspring can be satisfactorily determined. In the cases above quoted, as well as in the American case (from *Science*) to which allusion was previously made, it is the father who transmits the injury. We have no example at hand in which an injury or deformity of a mother has been transmitted, although, as is well known, the mental impressions of the mother may affect the offspring. One curious point in "heredity" is the transmission of peculiar *habits*, and the reproduction, in the children, of even the tricks of manner and peculiarities of the parents.

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Mr. Darwin has noted many interesting examples of such cases. We have seen the handwriting of a father imitated by a son, and we know two brothers whose handwriting is exactly similar, although they are not associated in any way, either socially or in business. "Gait, gestures, voice, and general bearing," says Mr. Darwin, "are all inherited, as the illustrious Hunter and Sir A. Carlisle have insisted." One of the most curious examples of inherited tricks is given by Mr. Darwin. A boy acquired the habit, when pleased, of rapidly moving his fingers parallel to each other, and when excited, of raising both hands, with the fingers still moving, to the sides of his face on a level with the eyes. When an old man, the habit was still practised involuntarily, although, from its absurdity, trouble was taken to conceal it. This individual had eight children. One, a girl, at the age of four and a half years, when pleased, moved her fingers in exactly the same fashion as did her father, and, when excited, raised her hands to the sides of her face as he was in the habit of doing. Imitation here, as Mr. Darwin adds, was "out of the question." A father, when asleep, was in the habit of lying on his back with the right leg crossed over the left; his infant daughter in the cradle followed exactly the same habit, although an attempt was made to cure her.

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The above notes merely open up, but do not satisfy, the craving to know more of the operation of the mysterious law that "like begets like." Doubtless the science of the future will enlarge our views and notions of the laws of inheritance; but, in the meantime, intelligent observation may effect much good in placing before scientific men illustrations and examples, from a study of which further advances in our knowledge may be made. We may only add that readers who wish to place on record their family histories, and to make an interesting study of family characters, cannot do better than purchase Mr. Galton's "Life History Album," and his "Record of Family Faculties," both published by Macmillan & Co., London. Mr. Galton offers prizes to the amount of £500 "to those British subjects, resident in the United Kingdom, who shall furnish him, before May 15, 1884, with the best extracts from their own family records." Here is a chance for intelligent appreciation of family histories and individual characters which should not be lost sight of by the public.

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We are glad to note that the "National Health Society" propose to inaugurate a conference on "School Hygiene," during the International Health Exhibition period. It has been arranged that papers on various subjects relating to school-health will be read, discussion being invited. All teachers and others interested in the subject, and who may propose to take part in this interesting conference, are invited to address the Secretary of the National Health Society, 44, Berners-street, London, W.

A correspondent points out that the common idea of the infectious nature of consumption was long ago ventilated in Smollett's "Humphrey Clinker." "You won't deny," so runs the passage, "that many diseases are infectious; even the consumption itself is highly infectious. When a person dies of it in Italy the bed and bedding are destroyed, the other furniture is exposed to the weather, and the apartment whitewashed before it is occupied by any other living soul." Clearly, in Italy, long ago, they had sound ideas, at least, on the subject of disinfection.

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A highly interesting series of statistics dealing with a matter of high social importance has been compiled by Mr. Alexander McDougall, of Manchester. Dealing with the causes of Manchester pauperism, Mr. McDougall shows that while 51·24 per cent. of Manchester pauperism is produced by drunkenness, 48·76 per cent. of the cases is due to other causes. One-eighth of the pauperism of the township is caused by infirmity and by the circumstances inseparable from old age, but involving no discredit to the poor of this first class. One-seventh of the cases of pauperism is due to disease or accident—many of these cases having been supported by friends until relief became absolutely necessary. The third class includes cases in which the head of the family, although willing to work, could not obtain employment. Only one-fortieth of the cases are classified under this head. Idleness and want of thrift, *not* associated with drunkenness or with immorality, forming a fourth class, did not appear to have acted as a cause of pauperism in a single case. Drunkenness in men caused nearly one-fourth of the entire pauperism; and, curiously enough, men employed in skilled labour appeared to illustrate this source of poverty in the proportion of four to three of those employed in unskilled labour. The drunkenness of women caused one-twentieth of Manchester poverty; and in a seventh class Mr. McDougall includes pauperism caused in the *widows and children of drunkards.* To this latter cause one-fifth of the poverty of that city is alleged to be due.

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It is deplorable to read regarding this latter class that most of the husbands had been skilled workmen earning large wages. The widows and children of well-conducted husbands contributed one-sixth to the total pauperism, and in this eighth class we note that the unskilled husbands predominated over the skilled, thus reversing the position of matters in class seven. Widows of well-conducted husbands, but burdened with drunken sons, contributed 1 per cent. to the total cases; and a tenth class included women reduced through bad conduct, but not drunkards. The proportion of these latter cases is not given.

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There is "food for thought" contained in this roll of pauperism. We see plainly enough that while drunkenness is not responsible for all the poverty, it may yet be credited with causing its own unhealthy share of misery. Mr. McDougall has added to his labours an interesting observation regarding hereditary influence on pauperism. It is often alleged that the children of paupers tend to become paupers likewise; but in the Manchester statistics, the proportion of persons (over sixteen years of age) born paupers, and who applied for relief, did not reach 1 per cent. of the total number of paupers. It is much to be desired that statistics as laboriously and carefully compiled as these of Mr. McDougall's should be collected by way of illustrating the causes of pauperism in other cities and towns.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE MEDICAL USES OF HOT WATER.

By Dr. Andrew Wilson.

The proverbial phrase which maintains the inadvisability of being kept in hot water, does not certainly apply to the uses of this beverage in medical practice. As a matter of fact, hot water has been found a valuable remedy in the treatment of many diseases, as well as in the cure of simple ailments.

Dr. James H. Salisbury, of New York, announced in 1858 the result of a series of elaborate experiments, which he had conducted with a view to ascertaining the exact uses of hot water in the cure of disease. Dr. Salisbury, experimenting on foods in their relation to the relief of ailments, discovered that hot water of a temperature varying from 110° to 150°, was highly serviceable in relieving painful conditions induced by improper feeding. He found that this beverage, diluting the ordinary fluids and secretions of the digestive system, affected the work of the liver and kidneys, and produced results of the happiest kind in the restoration of health. Recently, Dr. Cutter, of New York, has admirably summarised the methods of using hot water for the cure of disease. He tells us that the water must be really hot, and not merely lukewarm. It must possess the temperature above noted. If lukewarm, the water will only excite vomiting; whereas, when really hot, the water appears to soothe the irritable lining membrane of the stomach and bowels, and even in cases of bleeding to produce, as indeed physiology has shown, contraction of the blood-vessels and cessation of the latter complaint.

The quantity of hot water to be taken at a draught, according to Dr. Salisbury, varies from half a pint to one pint or more at one drinking. The test of benefit being derived from the use of hot water is said to be that derived from the kidney-secretion, which should be pure, free from odour and deposit. Regarding the times at which hot water should be taken, one to two hours before each meal, and half an hour before retiring to rest, are stated as the periods most suitable for its administration; while the water must be sipped, and not taken so fast as to cause distension of the stomach. Dr. Cutter tells us that from fifteen to thirty minutes may be consumed in the draught of hot water. This form of hydropathic treatment, according to the authorities just named, should be practised in cases of digestive troubles for a period of six months or thereabouts, and Dr. Cutter further adds that as the practice promotes health, this hot-water treatment may be practised by people in health throughout life, as a means of internal cleanliness. Regarding the amount of liquid to be taken with a meal, not more than eight ounces has been prescribed as the regulation quantity; a larger amount tends to dilute the gastric juice to too great an extent.

Various additions may be made to hot water by way of rendering it palatable, although it may be mentioned persons accustomed to drink hot water, in time learn to like its taste and to really enjoy their beverage. In cases of intense thirst, a pinch of chloride of lime or nitrate of potass might be added by way of allaying the irritation. For constipation, a teaspoonful of sulphate of magnesia or half a teaspoonful of taraxacum may be added to the hot water. For diarrhœa, cinnamon, ginger, and

pepper may be boiled in the water, and the quantity of the liquid lessened.

Dr. Cutter, in summarising the effects of drinking hot water, alludes to the improvement in digestion which is duly noted. The thirst and the dryness of the lining membrane of the digestive canal disappears in a few days. The skin assumes a healthy appearance and condition, and acts freely in getting rid of the waste matters of the frame. He also adds that in cases of drunkenness, the drink-crave is materially lessened and may be cured by the use of hot water.

There seems to be little doubt that hot water, judiciously used, unquestionably forms a valuable means of treating many common intractable diseases. In cases of obstinate indigestion, it is undoubtedly well worth a trial. The secretions of the digestive system which become disordered in this painful malady, are diluted by the water, washed from the surfaces they irritate, and excreted rapidly from the body. Indeed, the process of eliminating or getting rid not merely of the ordinary waste of the frame, but likewise of disordered secretions, is remarkably accelerated by this form of treatment. Sufferers from indigestion might with advantage be recommended to follow the advice of Doctors Salisbury and Cutter. The former said, "If I were confined to one means of medication, I would take hot water;" and Dr. Cutter adds that whilst Dr. Salisbury has drunk hot water for twenty-five years, he can himself testify from his own personal experience of the truth of the Salisbury treatment. The simplicity of the treatment forms one of its highest recommendations, and we have, therefore, pleasure in presenting the above summary to the readers of HEALTH, in the hope that it may possibly prove useful in the treatment of some of the common ailments to which humanity is liable.

DISEASE GERMS AND THEIR RELATIONS.

By Dr. H. Fol of Geneva.

(Translated from the *Journal de Genève*.)

SECOND PAPER.

From a practical point of view, we may divide microbes or germs into three classes—those which are useful, those which seem to have no effect, and those which are positively harmful. We have already mentioned the first class; the second are very numerous; for, to say nothing of the many species which inhabit all the recesses of nature and concern us only very indirectly, we undoubtedly support quantities of them in the cavities of the surface of our bodies and of our digestive canal. Nothing equals the astonishment and confusion of many persons, when, by a turn of the hand, the microscope shows them all the various forms which live at their expense. They include all kinds, from the harmless *Spirillum* in the saliva, to the *Leptothrix*, which is the most active agent in the decay of teeth. But all this is on the surface: the interior of our bodies is completely free from them; and it may be said that in our organisation every means is taken to defend the entrance to the organs from ordinary microbes, and to remove them if they succeed in forcing entry. There is, however, a certain number of species which have the sad privilege of being able to penetrate and support themselves in the body of a subject predisposed to receive them. The microbe of "blood-poisoning" or *septicæmia* enters only through an open wound, while those of consumption and leprosy attack directly the lungs or mucous membranes of the persons afflicted. The surfaces of the lungs and of the alimentary canal seem to be the customary points of attack for the organisms which cause various infectious diseases.

Our organisation is like that of a civilised nation, whose citizens are represented by our cells. The skin becomes broken (the wall of China discloses a breach), and immediately there are hordes of savage microbes which enter, at strife with the national soldiers (our cellular tissues). The microbes multiply, and scatter around a poisonous liquid; the cells combine, and try to starve their dreaded enemies, and to repair the breach. The battle-field is small; but the victory is warmly contested, and the sight has its exciting aspect. The result of the struggle depends on the number of combatants and on the energy of the competing forces. The antiseptic treatment of wounds, aims to reduce as much as possible the number of microbes which enter, and to retard their development; for no one familiar with the subject would think it possible to entirely exclude them. How interesting it would be to trace the events of the contest between the organism and its invaders in the case of an epidemic disease! Science, we hope, will soon be in a condition to give us this history.

The diseases which have been traced with certainty to parasites are as yet few in number; they may be counted on the fingers. To discover the nature of a disease, there must be a uniformity of experiments and evidence, of which the public, and even the majority of specialists, take no account. Nothing is easier than to examine with a microscope small parts of the various organs of a dead body, and attribute the fatal disease to the germs found under these circumstances. These would-be discoveries, soon disproved, have only the effect of causing the public to mistrust useful investigations, and cast undeserved discredit on serious work performed in the most methodical manner. To know a parasitic disease, it is not enough to have seen the pathogenic microbe. It must have been removed from the other microbes, and cultivated through a long series of generations in sterilised soups; animals must be inoculated at various times with these pure types, and each time all the symptoms of the disease whose cause is sought must be observed. In this way Dr. Koch has revealed the germs of charbon and tuberculosis; and these discoveries have been granted to science, after being examined by a number of investigators, among them Professor d'Espine. Long and very careful cultivation was necessary to show, after Dr. Haltenhoff's interesting paper on this subject, that the juice of the *jequirity* owes its extremely virulent properties only to the microbes which it contains. We know quite satisfactorily the organisms which produce leprosy, erysipelas, and charbon; but for diphtheria, typhus, intermittent fevers, and many other diseases, the agents are still undiscovered.

EXAMINATIONS, SCHOOLS, AND HEALTH.

By Geo. G. Chisholm, M.A., B.Sc.

THIRD PAPER.

I come now to what is, after all, the most important part of our task—a consideration of the remedies that may be suggested for the unhealthy strain that is at present but too apparent in many parts of our educational system. In approaching this part of the subject, I am fully conscious of the difficulties that stand in the way, and of the danger of suggesting remedies that may be open to many objections. But with regard to this latter fear, I have the less

The "Spécialité" Lime Juice, for family daily use throughout the year, has not the usual musty flavour; will not turn mouldy; may be obtained of Chemists and Grocers.—Feltoe & Sons, Albemarle-street, London, W.—[Advt.]

hesitation in making such suggestions as seem to me suitable, since, if unsound, they can be amended. It is the rule of human progress that the errors of one mind should be corrected by the insight of others.

Further preliminary considerations would be out of place here, and I will therefore proceed to treat the subject on which I have entered in detail, and in doing so I will begin with the remedies that may be proposed for the evils connected with our elementary education, and especially that given under Government direction and control in our Board schools. It seems to be perfectly plain from the extracts given in my last paper, that the worst evils in that part of our educational system are due to the method adopted for applying the principle of payment by results. Now, I am not in the mean time going to suggest anything so utterly impracticable as the entire abandonment of this principle, even though it appears the principle has been abandoned in Upper Canada, after being once adopted. I am well aware that the British public, when it spends any money, will insist upon its right of knowing how it is spent, and with what result, in the direction aimed at by the expenditure. And the British public is quite right, provided it can make quite sure by any exact system of measuring and testing that the money shall be properly expended for the purpose to which it devoted. But there is something almost touchingly simple in the assumption that the easiest measure to apply actually measures what we want to have gauged. And that is practically the assumption made in our present mode of applying the principle of payment by results. It is as if a timber merchant should estimate the value of his yard by simply applying the measuring-rule to the logs lying in it, without considering whether the timber was deal, oak, or walnut. Even if we grant the unassailableness of the Sherbrookian maxim as to placing a man's ear "within the ring of pounds, shillings, and pence," it is surely important to consider what it is exactly that placing a man's ear in that position will induce him to do. Now, what the method hitherto adopted for applying the principle of payment by results induces him to do, we have already seen; and there is hardly a more general complaint among inspectors of schools than that the system of driving as many children as possible through the standards in order to earn as high a grant as possible is a system wholly adverse to really good education. This, however—namely, a really good education—is precisely what the British public wants to pay for and ensure.

I am glad to acknowledge that the last code issued by the Education Department has, in answer to the representations repeatedly made by the teachers and inspectors of schools, introduced a principle of awarding grants more likely to secure satisfactory results than that hitherto chiefly relied on. It institutes what is called "a merit grant," which is to be awarded in varying amount according as the Inspector, "allowing for the special circumstances of the case, reports the school to be fair, good, or excellent, in respect of (1) the organisation and discipline; (2) the intelligence employed in instruction; and (3) the general quality of the work, especially in the elementary subjects.

Now, all this is good, so far as it goes. It furnishes an inducement to the teacher to give up the driving system for dull pupils in so far as he sees that to be prejudicial to the general excellence of the teaching, on the strength of which the inspector is to award the merit grant. But while instituting this better principle, the code still retains the old obnoxious principle of causing the grant to be effected by every individual pass, and in so doing retains that which will tend to the perpetuation of an undue and unhealthy strain on both teacher and pupil. Among the other grants still to be awarded is "a grant on examination in the elementary subjects determined by the percentage of passes in the examination at the rate of 1d. for every unit of percentage."

"My lords," had they been educated at Board-schools, might, perhaps, have managed to make their meaning a little clearer; but I am informed that what that rule means is this, that this grant will be equal to 1d. per cent. of passes multiplied by the average attendance. Thus, if a school have an average attendance of 100, and 80 of these pass, then the amount of the grant will be a hundred times 6s. 8d. Obviously, this makes the passing even of a single child a matter of some importance to a teacher, and hence the encouragement to unhealthy driving still remains.

The first remedy that I would suggest, therefore, is the abolition of the mode of awarding grants, by which the amount of the grant is affected by every child that passes. The satisfactory expenditure of the money laid out by the country on elementary education might be sufficiently well ensured under a system of awarding grants that gave an adequate inducement to teachers to exert their energies, but offered no inducement, or as little as possible, to exert them in a wrong direction. Now, we may readily believe inspectors of schools when they tell us that, although an exceptionally high percentage of passes is no proof of generally good teaching, yet where the teaching is really good the percentage is never a low one. On this ground, it would be quite reasonable to make the amount of grant dependent to some extent on the percentage of passes, though it should not be affected by every individual pass. Probably it would answer all the ends in view in a rough but sufficiently satisfactory manner to vary the amount of the grant, not according to every unit of percentage in the passes, but according to larger intervals in the percentage. Where only 60 per cent. passed, a relatively small grant might reasonably be awarded; where 70 per cent. passed, a higher grant; and a still higher for 80 and 90 per cent.; while no difference was made in the amount of grant for any increase in percentage between these intervals. The proper intervals of percentage to determine the rise in the grant, and the rate of increment, might be fixed by their lordships in council, after consultation with experienced teachers and inspectors of schools.

I may point out that if this suggestion were adopted, it might help to pave the way for the remedy demanded by the teachers themselves, in a letter recently sent to the Education Department, in reply to one written at the desire of their lordships with reference to the representations that had been made to them on the subject of overwork in schools. This letter of their lordships, while containing

Medical and Sanitary Exhibition, 1881.—Award of Merit.—Diabetes. Van Abbott's Gluten Bread, and all other suitable Foods for Diabetic Patients. Dietary Tables and Price Lists post-free on application. Van Abbott, 5, Princes-street, Cavendish-square, W.—Delicate Children and Adults Suffering from Nervous Depression. Van Abbott's Hypophosphite of Lime Biscuits, for Delicate Children, especially those suffering from Deficiency of Bone, Weak Joints, or Debility, and Adults suffering from Nervous Depression. Each Biscuit contains five grains of the Hypophosphite of Lime. "Quite free from disagreeable taste, and taken willingly by Children, and certainly provide an excellent means of administering this valuable compound. Our analysis proves the accuracy of the printed descriptions on the labels of the boxes. The Biscuits were suggested by Mr. W. Adams, of the Orthopædic and Great Northern Hospitals." — *Lancet*, Nov. 4, 1876.—Van Abbott, 5, Princes-street, Cavendish-square.—[Advt.]

Pure Water is such a vital necessity that, without it, illness is certain. None are more prone to the ill effects when impure than the young. To ensure a pure supply send a post-card to the London and General Water Purifying Company, Limited, 157, Strand, London, W.C., who will return particulars post free.—[Advt.]

many excellent remarks well worthy of attention, throws the blame of such over-pressure as has been shown to exist not on the code itself, but on "the inconsiderate manner in which its provisions are used for the purpose of obtaining high grants." But to this the Executive Committee of the National Union of Elementary Teachers make the unanswerable reply, that so long as high grants can be obtained by over-pressure, "and in many cases in no other way," and so long as human nature remains what it is, managers will demand, and teachers will be compelled to obtain, high grants.

What the teachers, then, seek to obtain as a remedy for the irresistible temptation to over-driving, is liberty to arrange their pupils in classes according to their own judgment. Under the present rules, a scholar once placed in a standard must, except in special cases, and these not selected on the judgment of the teacher, be raised a standard every year, however much he may fall behind his fellows. What the teachers claim, is the right to use their own judgment in putting their scholars every year into the classes suited to their needs and capacities. It seems to me that this is a right that ought to belong to the teacher. No one can be better fitted, as a rule, than the teacher, to say for what class a child is suited. Yet we can easily understand the reluctance of their lordships to allow a claim by which they fear lazy teachers would be enabled to earn more than their proper share of the grant by keeping children unduly behind. If, however, the principle above suggested for the awarding of the grant were adopted, there might be less hesitation on their lordships' part in acceding to this demand of the teachers, since the large intervals of percentage by which the proportion of the grant would then be determined, would not be so easily affected by the keeping back of one or two children who ought not to have been kept back. The teacher would have the liberty he claims to keep back those not fit for promotion, but he would not be under the same temptation to retard the advancement of those who ought to be advanced.

TREATMENT OF WARTS.—A plaster of black soap, applied each night for a fortnight, according to M. Vidal, will soften a wart so that it may be scraped off. The treatment by M. Cellier is to transfix the principal wart with the point of a pin, the head of which is then to be held in the flame of a candle until the wart is destroyed; it will drop off in a few days. The remaining warts will then usually disappear.—*La France Médicale.*

ANTISEPTIC SPONGE.—The sponge is first well shaken and beaten to extract as much as possible of the sand, broken shells, &c., which it always contains. It is then washed in warm water, and, after being well pressed, is left to soak in a solution of permanganate of potash or Condy's fluid. The solution contains 3 per cent. of permanganate, and the sponge remains in it three, four, or five hours. The sponge is next well washed and bleached. For this purpose it is placed in an earthenware vessel filled with a solution of hyposulphite of soda (29 to 30 per cent.), to which is added dilute hydrochloric acid (40 per cent.), which causes a copious evolution of sulphurous acid. In the course of ten or fifteen minutes the tissue of the sponge is thoroughly bleached. It is washed in a brisk stream of water, and then allowed to remain for a few hours in a 5 per cent. solution of carbolic acid. It is next wrung out, and before being put away is steeped in a 2 per cent. solution of salicylic acid, which thoroughly preserves it. The sponge thus treated is pressed and dried slowly, and stored in glass cases quite closed and exempt from dust of all kinds.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

ORIGIN OF INDIGESTION.

(From the *Popular Science Monthly.*)

FIRST ARTICLE.

BEFORE our ancestors colonised the colder latitudes of this planet, the equatorial regions had for ages been inhabited by men or man-like four-handers. The influence of this long abode in the tropics still asserts itself in many peculiarities of our physical constitution. We are but half acclimatised. Wolves are weather-proof; bears and badgers have managed to inure themselves to the miasma of their winter dens; but the primates of the animal kingdom can neither endure cold nor breathe impure air with perfect impunity; and of most of our civilised fellow-men, as well as of savages and all the species of our four-handed relatives who have thus far been wintered in northern menageries, it may be said that the sensitiveness of their lungs contrasts strangely with the tough vigour of their digestive organs.

In proportion to his size, a rhesis baboon eats more than a wolf; between morning and night a ceboo monkey will devour his own weight in bananas, and, where the cravings of a naturally vigorous stomach are increased by the stimulus of a cold climate, it seems almost impossible to surfeit a savage with palatable food; his appetite is the faithful exponent of his peptic capacity, and before the fauces positively refuse to ingest, there is little danger that the gastric apparatus will fail to digest. Manifold and enormous must have been our sins against the dietary code of Nature before we could succeed in making indigestion a chronic disease. Deviations from the chemical standards of her *menu* are insufficient to account for her wrath. With all their unmistakable structural evidences of a frugivorous purpose, our digestive organs have been permitted to adapt themselves, not only to a carnivorous and herbivorous diet and various innutritive substances, but to a considerable number of positive poisons. The Yakoots live on fish and seal-bladder. The Shoshones stick to bull-beef. The Namaqua Hottentots (who cannot plead the exigencies of a cold climate) subsist almost entirely on venison. Several tribes of Northern Brazil eat clay with comparative impunity. Our Saxon forefathers added beer to venison and beef; and when they took to in-door life, the stomach protested only by proxy,—an utterly wrong diet led, not to dyspepsia, but to scrofulous affections. Excess in moderately unwholesome viands has to be carried to a monstrous degree before the after-dinner torpor turns into a malignant disease. The stomach of a nomad seems to acquire a knack of assimilating a modicum of the ingesta, and voiding the rest like so much innutritious stuff. Dr. Robert Moffat saw a Bushman eat twenty pounds of hippopotamus liver and a

DR. NICHOLS' PENNY VEGETARIAN COOKERY-BOOK.—Every household should possess this marvel of cheapness. Free for 1½d.—NICHOLS & Co., 23, Oxford-street, London, W.—[ADVT.]

THE "BONCONTOUR" STAY-BELT and other Orthopædic Apparatus, made by K. R. SCHRAMM, Orthopædic Mechanician, 64, Belmont-street, Chalk Farm-road, London, W.—[ADVT.]

SCOTT'S MIDLOTHIAN OAT-FLOUR.—There is no preparation which can be assimilated with greater facility than such a flour as this. Those who suffer from indigestion might substitute for their ordinary breakfast materials this flour, prepared according to the recipe given by Messrs. Scott and printed on the tins.—ED. HEALTH.—[ADVT.]

bucketful of broiled marrow, besides handfuls of ground-nuts, parched corn, and hackberries—all within 24 hours. In the provincial capitals of Northern China, where banquets of forty courses are *de rigueur*, convivial mandarins learn to devour a quantum of comestibles that would torpify a boa-constrictor. Eating matches of fourteen and fifteen hours did not prevent Vitellius from acquiring distinction as a wrestler.

Daily alcohol-fevers, combined with pepper and mustard inflammations, would ruin the stomach of an ostrich; but in favour of the unfeathered biped, Nature accepts such vicarious atonements as gout and dropsy. Thousands of crapulous old Bavarian beer-swillers, who are hardly able to walk, are still able to digest their food. Indoor life and want of exercise then added their quota of provocatives; but where the lungs would have rebelled after seven protests, the stomach forgave seventy-seven times. Mediæval prelates, squires, and aldermen tried in vain to exhaust the patience of the long-suffering organ.

But their descendants finally solved that problem. To the alcoholic stimulants of the ancients we have added tea, coffee, tobacco, absinthe, chloral, opium, and pungent spices. Every year increases the number of our elaborately unwholesomely-made dishes, and decreases our devotion to the field-sports that helped our forefathers to digest their boar-steaks.

We have no time to masticate our food; we bolt it, and grumble if we cannot bolt it smoking hot. The competition of our domestic and public kitchens tempts us to eat three full meals a day, and two of them at a time when the exigencies of our business-routine leave us no leisure for digestion. At night, when the opportunity for that leisure arrives, we counteract the efforts of the digestive apparatus by hot stove-fires and stifling bedrooms. Since the beginning of the commercial-epicurean age of the nineteenth century, the votaries of fashion have persistently vied in compelling their stomach to dispose of the largest possible amount of the most indigestible food under the least favourable circumstances.

That persistence has at last exhausted the self-regulating resources of our digestive organs. But even after such provocations the stomach does not strike work without repeated warnings. The first omen of the wrath to come is the *morning languor*, the hollow-eyed lassitude, which proves that the arduous labour of the assimilative organs has made the night the most fatiguing part of the twenty-four hours. The expression of the face becomes haggard and sallow. The tongue feels gritty, the palate parched, in spite of the restless activity of the salivary glands, which every now and then try to respond to the appeals of the distressed stomach. This stomach acidity betrays itself by many disagreeable symptoms: loss of appetite, however, marks a later stage of the malady. For years the infinite patience of Nature labours every night to undo the mischief of every day, and before noon the surfeited organs again report ready for duty. Habitual excess in eating and drinking sometimes begets an unnatural appetency that enables the glutton to indulge his *penchant* to the last, only with this difference, that the relish for special kinds of food has changed into a vague craving for *repletion*, just as the fondness for a special stimulant is apt to turn into a chronic poison-hunger. This craving after engorgement forms a distinctive symptom of *plethoric dyspepsia;* but even in the first stage of asthenic or nervous dyspepsia, the hankering after food is not hunger proper, but a nervous uneasiness suggesting the idea that a good meal would, somehow, supply the means of relief. The first full meal, however, entails penalties which the sufferer would gladly exchange for the less positive discomfort of the morning. Instinct fails to keep its promise, as a proof that Nature has been supplanted by a deceptive second nature. Headache, heartburn, eructations, humming in the ears, nausea, vertigo, and gastric spasms, make the after-dinner hour "the saddest of the sad twenty-four;" a dull mist of discontent broods over the whole afternoon, and yields only to tea and lamp-light. The patient begins to fret under the weight of his afflictions, but still declines to remove the cause. To out-door exercise he objects, not on general principles but on some special plea or other. He has to husband his strength. The raw March wind would turn his cough into a chronic catarrh. The warm weather would spoil his appetite, and aggravate his vertigo. The truth is, that of the large quantum of comestibles ingested, only a small modicum is *digested*, and that the system begins to weaken under the influence of indirect starvation. Business routine prevents the dyspeptic from changing his meal-times. He cannot reduce the number of his meals; people have to conform to the arrangements of their boarding-house. The stomach needs something strengthening between breakfast and supper. The truth is, that the exertions of the digestive organs alternate with occasional reactions, entailing a nervous depression which can be (temporarily) relieved by the stimulus of a fresh engorgement. Business reasons may really prevent a reduction of working hours, and domestic duties a change of climate or of occupation. The daily engorgement in the meanwhile goes on as before.

A Valuable Invention.—It is gratifying to learn that Mr. R. Adams, of 17, Blackman-street, London, S.E., whose fanlight-openers and silent door-springs are being extensively used, has received large orders for his Patent Reversible Window. The sashes, although they slide up and down in the usual way, can be instantly turned inside out, enabling anyone to clean each side of the glass with ease, while standing in the room.—[Advt.]

Hair Tonic.—Glycerine, 4 oz.; alcohol, 2 oz.; water of ammonia, 2 oz.; tinct. of cantharides, 2 drms.; rose-water, 4 oz.; water, 4 oz; grain musk, 1 gr. Mix. When using this preparation no other dressing or pomade should be used.—*Boston Journal of Chemistry.*

Edible birds' nests, which are so highly esteemed by the Chinese, both as a food and for their supposed medicinal value, are described in a recent report from Borneo as being found principally in the water-worn limestone and sandstone caves that exist in considerable numbers all over the district of Brunú. They are the production of the Indian swallow (*Hirundo esculenta*), and are said by Europeans to have no more nutritive or medicinal value than so much wholesome isinglass, which substance they strongly resemble in every way. Many very absurd theories have been mooted as to the way in which the substance forming the nest is procured by the bird. The writer of the report says he is strongly inclined to believe that it is formed from the saliva of the bird—an opinion founded chiefly on the fact that the saliva-producing glands are during the nesting season always immensely enlarged, and evidently in very unusual functional activity. When it is remembered that a viscid secretion is usually found covering the inside of the mouth and the throat of birds living, as the swallow does, on small insects, caught while on the wing, and that the nature of their food is peculiarly fitted to supply the substance of which the nest is chemically composed, and that the nest, though strong, is very small, thin, and light, such a theory is more credible than one would at first suppose.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

ECONOMICAL BREAKFASTS, DINNERS, AND SUPPERS.

By Mrs. Thwaites, of Liverpool.

THIRD PAPER.

Breakfasts.—After all that has been said about the preparation of porridge, it will only be necessary to mention that very good and wholesome porridge may be made with coarsely-ground wheat meal, from which only the roughest bran has been removed. Thorough boiling is important; and, as it thickens fast when cooking, care must be taken to have it only moderately thick.

A word or two about the best methods of preparing stewed fruit. Any ordinary fresh English fruit may be prepared as follows:—Carefully pick and put into a perfectly clean saucepan. A china-lined one is best, there can then be no danger of the chemical action of the fruit acid on a metal, spoiling either the colour, taste, or wholesomeness of the dish. To a quart of fruit allow a ¼ pint of cold water; cover the pan, and simmer very slowly until soft; add enough sugar to make it pleasantly sweet; boil for three minutes after the addition of the sugar. It must be remembered that sugar is a useful article of food, and its use should not be stinted to those who like it. The heat-giving property is not equal to that of fat; but children especially can often take sugar when they cannot eat fat. People preferring the acid freshness of fruit must use only a small quantity of sugar. For preparing dried fruit, as apple chips, figs, prunes, &c., soak ½ lb. of apple chips for twelve hours by pouring a pint of absolutely boiling water over and covering them quite close, they absorb all the water, and closely resemble in appearance fresh apples sliced. Stew them slowly with the pan covered, and just enough water to prevent burning; when quite soft (the time will vary considerably) add two to three tablespoonfuls of sugar, grated lemon or orange rind or nutmeg may be used to flavour slightly. Figs or prunes should be well washed in warm water, stewed as above, and sweetened to taste. Young people have generally a natural liking for either cooked or raw fruit, which, for health's sake, ought to be encouraged as far as possible. Uncooked fruit, when quite ripe and sound, eaten with bread and butter, makes a wholesome meal, with which milk, or milk and water, would form the most suitable beverage. The price of good, sound fruit, fit to be eaten in its raw state, places it beyond the reach of many people, except as an occasional luxury. Quantities of fruit, however, quite unfit for food in its raw state, will be perfectly good when stewed and sweetened. Were more fruit eaten as actual food, and not as it too often is, between meals, the need for aperient medicines would be almost entirely done away with, and consequent frequent injury to the general health avoided.

The chief constituents of fruit are water, sugar, acids, and minerals. The very small quantity of nitrogenous or flesh-forming matter being hardly appreciable. It is to the acids and minerals that fruit owes its chief value. When taken in connection with farinaceous substances, a valuable and inexpensive diet is obtained.

Dinner.—*Potato Soup.*—1 lb. of peeled and sliced potatoes; put them into a pan with two onions and a stalk of celery cut up, 1 teaspoonful of salt, a ¼ teaspoonful of pepper, and a tiny bit of mace, add a quart of cold water; bring slowly up to boiling, and then add 1 oz. of fine sago and the same quantity of butter; boil slowly three-quarters of an hour, rub through a sieve, and add as much milk as may be necessary to bring it to the desired consistency, put in a teaspoonful of chopped parsley and heat.

Haricot Beans.—Wash and pick ½ lb. of beans; soak in cold soft water for at least twelve hours; put them on to boil in plenty of cold water. Salt must never be put in the water in which these beans are cooked; it hardens the albumenous matter they contain. Half a cupful of cold water should be added occasionally; this will prevent the outside of the bean breaking while the inside is still hard; two to three hours must be allowed for boiling; when quite soft, strain away the water. There are a great many ways of dressing the beans from this stage. The simplest is as follows:—Put the beans back into the pan; add a good teaspoonful of salt, and one of parsley, a quarter teaspoonful of pepper, an ounce of butter, and the juice of half a lemon; shake and mix well; serve hot.

An excellent salad may be made with cold haricot beans and sliced tomatoes, salt, pepper, vinegar, and olive oil. Haricots are rich in both carbonaceous and nitrogenous matter. Their percentage of the latter is higher than in lean meat; unless, however, they are properly cooked this nutritive matter is unavailable, being hard and indigestible. It is also necessary that they should be presented at table in as tempting and palatable a form as possible, always assuming that not only condiments, but a certain quantity of fat are required. Their use should be encouraged amongst the working classes; and, although it is not likely that they will be, to any extent, substituted for meat, it is very certain that they will always make a little meat go further than it otherwise would do; besides, the dryness of these beans adapts them for cooking with salt pork or bacon, favourite articles of food with the working classes.

Braized Beef.—A piece of 2 lb. to 3 lb. may be chosen from the coarser parts of the animal for this dish. Put the meat, which should be lean, into a bowl and pour over it two tablespoonfuls of vinegar, and the same quantity salad-oil, let the meat remain in this three hours, turning it frequently so that all parts may be touched with the oil and vinegar. Prepare and cut up two carrots, two onions, one turnip, one stalk of celery, and any other vegetables that may be at hand, put them at the bottom of a saucepan that will just hold the meat; add one bay-leaf, a small bunch of sweet herbs, six cloves, and about eight peppercorns, bind up the meat and put it into the pan, lay a slice of fat bacon over it, fill the pan with cold water or stock so that it comes to about half-an-inch from the top of the meat, butter a piece of kitchen paper and put it, buttered side down, over the meat so that the steam will be kept in, cover the pan and set it over a very gentle heat. When boiling point (212° F.) has been reached, draw aside and endeavour to keep at about 170° F.; 3 lb. of meat should simmer thus for two and a-half to three hours. The meat should be placed on a dish, the

Barnes's Impermeable Opium Poultice, an effective and perfectly safe application for relief in neuralgia, gout, rheumatism, painful swellings, and lumbago. Prices by post 1s. 3d. and 2s. 5d. 1 and 2, Trevor-terrace, Knightsbridge, S.W.—[Advt.]

Sanitary Inspections.—Fee for Survey and Report, in London, 2 Guineas. Estimate given and Improvement Works carried out when required.—The Sanitary Engineering Co., 115, Victoria-street, Westminster, S.W.—[Advt.]

Powngeby's Pure Wines and Brandies, as analysed, and especially selected to suit medicinal purposes, may be obtained in small quantities at wholesale prices. Free delivery within fifty miles. Circular and price current by post from Powngeby & Co., Wine and Brandy Importers, 183, Oxford-street London, W.—[Advt.]

vegetables round. The gravy must be skimmed and strained and then thickened with a tablespoonful of flour mixed with a very little cold water; it should be boiled up and seasoned to taste with salt, pepper, and a tablespoonful of sauce, pour round the meat. The goodness and economy of this dish, depend upon its being *slowly* simmered the whole time.

Supper.—*Stewed Tripe.*—2 lb. of tripe cut into pieces, 1½ in. square; put into a pan and cover with cold water, bring up to boiling, throw away the water, add just as much milk as will cover the tripe, simmer slowly for one hour. In a separate saucepan boil five or six medium-sized onions until they are quite soft; strain and chop them. Mix a tablespoonful of flour smoothly with a little cold milk, add this to the tripe, then the chopped onion and salt and pepper to taste. Allow it to boil up. Serve hot. Mustard is an improvement.

Tripe, with a very good show of reason, is a favourite supper dish. It is not so nutritious as meat, but as it is digested in about one hour, it does not interfere with rest and sleep; it would not, however, form a satisfying meal for midday. Doctors frequently recommend tripe as food for invalids. Carefully cooked, it is extremely suitable for them; its greatest drawback is its want of any decided flavour of its own. It, however, readily takes other flavouring. The fat found on one side of tripe may be retained altogether or partially for a supper dish, but should be removed for an invalid. It is well to state that in towns tripe is bought from people whose business it is to prepare it. As we see it sold by them, it has been cleaned and boiled for several hours, and has had the grease carefully skimmed off. The one hour's boiling mentioned above is after and apart from the long boiling.

A FEMALE TEACHER'S STATEMENT OF HER WORK, AND ITS EFFECTS.

The *Lancet* publishes the following statement of the experience of a pupil teacher, which will be read with interest at the present juncture:—

"Having been a student and teacher in public schools for the last ten years (from 1874 to 1878 as a pupil teacher, 1879 to 1880 as a student at college, and from that date to the latter end of 1883 as an assistant), I may state that my health has quite broken down in the work, indeed so much so that it is with deep regret I have been compelled to give up all idea of again following my profession. The reason of my impaired health has, I am assured upon first-class medical authority in London, arisen almost entirely from too great a strain of work, and I will here give a brief detail of the labours that fell to my lot as pupil teacher. At the age of fourteen I entered my apprenticeship and served a period of five years. During the summer months I had to be at the school at 7.30 in the morning, (which necessitated my rising at 6 o'clock) to receive an hour's instruction from the head mistress, the amount of instruction each week amounting to six hours. During the winter months this time was altered to two hours on three evenings in each week. Each day from 9 to 12 a.m. and from 2 to 4 30 p.m. was spent in actual teaching, the number of pupils taught in the various classes averaging from 50 to 60. At the end of each year an examination was held to test the ability of the teacher in specified subjects. In order to pass this examination successfully careful study was required, which study had necessarily to be accomplished out of school hours. I may safely say that I never left school at the close of the day without feeling worn out in body and mind, and quite unfit for the evening work, which had to be accomplished, if I wished to pass the examination creditably and fit myself for the retaining of my appointment. Actual teaching per day averaged five hours and a half. Tuition and private study three to four hours per day (this compulsory five days a week). On Saturday, although nominally free, two or three hours were devoted to study. Week-day meals, in summer: Breakfast, before 7.30; dinner, between 12.30 and 1.45. Daily exercise: Walk to and from school."

GIRL GYMNASTS.

[Dr. Frances Hoggan writes to the *Standard* strongly advocating gymnastics for girls.]

Let the ladies learn gymnastics, if they please, as well as men,
Alternating feats athletic with the pencil and the pen;
They'll improve too pale complexions, and their eyes will shine as stars,
After practice on the ladders and the horizontal bars.

Rounded shoulders, slouching gait, and also haply crooked spines,
By gymnastic exercises shall grow straight as mountain pines;
Let the girls then learn athletics who in town are apt to droop,
Careful drill will make them upright and eradicate the stoop.

We should educate the muscles as we ever try to train,
By severe examinations, many a weary little brain;
We'll improve the dainty *deltoid* and the *flexors* of the arm,
While the shapely *gastrocnemii* shall obtain an added charm.

Muscular shall be our children as the heroines of Reade,
And like Scott's moss-trooper hero, they shall all be "good at need;"
Having taken boxing-lessons, ill-used wives will turn like worms,
While the brutish British husband pusillanimously "squirms."

Punch.

The association of sugar and fat is not founded upon their combination in "toffee," but upon their allied composition. Both are hydro-carbons, destitute of nitrogen, and in some modern, but practically obsolete books upon food, would have been classed very low as foods. In reality their food value is very high.

As regards the free use of water under some conditions of the digestive organs, it may be said that no agent can prove safer or more salutary. Those who have morbid conditions of the stomach and bowels, which do not so far impair the general vigour as to prevent attention being given to the ordinary duties of life, can often use large draughts of water, especially in the morning, with manifest advantage. Obstinate constipation is thereby removed, the normal peristaltic motions of the bowels are restored, and the secretions may be vastly improved. We notice the salutary influence of water-drinking upon many of those who resort to the so-called mineral springs which abound in the country. It is not necessary that these springs should hold abnormal quantities of salts of any kind in order to effect cures; it is only necessary that the water should be pure. Spring waters that are charged heavily with saline ingredients, like some of those at Saratoga, are positively injurious to nearly or quite all that use them freely.

Scott's Midlothian Oat-Flour.—Messrs. Scott, of 82, York-street, Glasgow, have prepared a singularly pure and nutritious "Oat-flour," which bids fair to take high rank among the food products which are specially adapted for infants and invalids, and for the use of dyspeptics in particular, whose digestion is weak, and whose stomachs refuse to assimilate foods of ordinary kind.—Ed. Health.—[Advt.]

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

HOUSE-HEATING APPLIANCES.

By Professor Trowbridge.

FOURTH PAPER.

Two modes of heating are in vogue by which the demands of economy and comfort are then met, viz., the hot-air furnace and the steam-heating apparatus. The hot-air furnace is simply an encased stove outside of, and away from, the apartments to be heated, generally in the cellar or basement of a building. The casing or chamber within which the stove is placed is put in communication with the external air by an inlet conduit, which serves the double purpose of furnishing air for combustion and for supplying a number of rooms with heated air. To effect this twofold purpose there is a chimney direct from the stove for the removal of the gases of combustion, and one or more flues leading from the air-chamber around the stove, with branches for the different apartments, for that portion of the air which comes in contact with the heated surfaces of the stove and casing, and which then passes to the rooms. The air is usually heated to a temperature of 250 to 400 degrees, and by mixture with cold air may be brought down to 150 to 200 degrees, at which temperature it will enter the rooms. Air at these high temperatures must be further reduced in temperature and mingled with cold air in the rooms to be warmed, and for effecting this object reliance is generally placed on the accidental leakage at doors and windows. The expulsion of the heated air is accomplished by a spontaneous draft through flues from the heated apartments to the roof, or into the halls and thence to upper stories.

A single furnace may thus heat very economically an ordinary dwelling; but the disadvantages and defects of the system are numerous. Beyond a certain limited distance from the furnace the difficulty of conveying heated currents in this manner increases very rapidly; and where there are branch ducts leading to many rooms, one branch may overpower another, causing excessive heat in one room and a deficiency in another. The proper ventilation of apartments is difficult, and the highly heated currents, having an increased capacity for moisture, are apt to convert the rooms to be heated into drying chambers, to an extent that is neither agreeable nor healthful. A few open fires, arranged to produce proper ventilation, mitigate very much some of these evils. For large buildings several hot air furnaces must be provided, and the economy is proportionally diminished.

All of the above-described methods have been supplanted to some extent, in this country at least, by steam-heating apparatus, or its practical equivalent in limited circuits, the hot-water apparatus. Even for ordinary dwellings this system is being gradually extended, while for large blocks, such as apartment houses, hotels, manufacturing establishments, school-houses, and other large structures, the system is so greatly in demand as to have given rise to new and extensive industries devoted to the manufacture and instalment of the necessary apparatus.

Steam-heating is characterised by the fact that the heat is generated in the furnace of a boiler either within or without the walls of the building to be heated, the heat of combustion being transferred to water, which, when vaporised, constitutes the medium by which the heat is conveyed in comparatively small pipes to the point where it is utilised for heating purposes. Two distinct methods of utilising this heat are practised. In one the steam pipes are carried, by the most convenient course, directly into the room or space to be heated, where, by convolutions of the pipes, or what are known as radiators, an extended heating surface is furnished to the room. These coils, or radiators, give off heat both by radiation and by contact with the air, which is kept slowly circulating, as in the case of a close stove; and it is evident that only a feeble, or at least uncertain, ventilation is possible, except through special arrangements made for introducing fresh air. These heated coils are, in effect, identical with close stoves, the only difference being that the surfaces of the coils can never be heated to a degree higher than that of the steam,—practically, never higher than 310° nor lower than 215° or 220° Fahr., while the surface of the close stove may, under some circumstances, approach 950°. Active and sufficient ventilation may be attained with these coils, however, if they are placed in such a way that cool air, introduced through openings—as, for example, under windows—will mingle directly with the heated air rising from the radiators, and then be deflected upward to be mixed with the general circulation, and discharged through ventilating flues. Of course, such active ventilation can only be obtained at the expense of additional heat.

Frosting glass may be produced by applying a solution of sulphate of magnesia in beer with a little dextrine added.

Pleasant Drinks.—Cut up a pound of apples into quarters, add half a pound of sugar, and then pour over them half a gallon of boiling water. Let it get cold, and then pulp the apples. Pour the fluid over the pulp, let it stand an hour, and then strain. This forms an agreeable drink, the acid of the apple blending with the sweet of the sugar pleasantly, so as to be grateful to a parched palate. Two ounces of tamarinds boiled in a quart of water for an hour, then left to cool and strain, also forms a pleasant drink.

National Health Society.—The eleventh annual report of the National Health Society, which was recently read at the society's rooms, 44, Berners-street (Dr. Robert Farquharson, M.P., in the chair), shows that the society has carried on its work during the past year in a most practical manner. Hundreds of lectures on sanitary subjects have been delivered, not only all over the poorer parts of London, but in provincial towns, to large audiences of working men and women, classes of girls, district visitors, and others engaged in work amongst the poor. The society is much encouraged by the practical results of their lectures on "Keeping the House Healthy," "Rearing of Infants," "Prevention of the Spread of Infectious Diseases," "Preparation of Food," and kindred subjects, a knowledge of which is so much needed in our densely-crowded neighbourhoods. The question of poisonous dyes in domestic fabrics, of dust collecting, of smoke abatement, and the prevention of cholera, have been investigated and reported upon by special committees appointed for the purpose. The Metropolitan Public Gardens and Playgrounds Association, which is in connection with the National Health Society, has been most active in assisting to open spaces for recreation in crowded parts of London, also in placing seats and planting trees in convenient situations. The Health Exhibition held by the society last June was commented upon, and the secretary stated that more than 100 members had joined the society during the year.

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

SOME WINTER RESORTS.

Southern and Swiss Health-Resorts. By Dr. Marcet. (London: J. & A. Churchill.)

I.

To the invalid about to proceed South for the benefit of his health, either it may be to avoid our chilly winter with its miserable fogs and variable, ever-changing climate, or, later still, to escape the treacherous east winds that infect the spring, the choice of a suitable locality is often no easy matter. He has, in the first place, a wide field of selection. Nice, Cannes, Mentone, San Remo, Pau, Algiers, Palermo, and the numerous other health-resorts to which the delicate are accustomed at certain seasons of the year to fly for refuge, have all their special advantages, and, in some cases, their characteristics so closely assimilate each other as to be almost indistinguishable. Then, again, he is influenced by other considerations. He desires company, cheerful society is as essential to him in its way as a healthy climate. He would like to go to a place where he knows some one, or if this be impossible, perhaps never having been on the Continent before, he must have a companion, and if so, whom? This is a most important matter. It is a truism to say that you never know people thoroughly until you come to be perpetually with them, and are dependent to a considerable extent on their tastes and manners for your comfort; and it is a truism that many people when travelling have found out to their cost. It is not surprising, therefore, if the invalid, under these difficulties—the difficulty, in the first instance, of deciding where to go, and afterwards whom to go with, to say nothing of minor embarrassments—should hesitate about going at all, should plaintively ask his physician, as he very frequently does, whether one of the home watering-places—say Bournemouth, Torquay, or Southport—would not suit his requirements equally as well.

We have been lead to these reflections principally through the perusal of the very interesting book on "Southern and Swiss Health-Resorts," by Dr. Marcet, formerly senior assistant physician to the Westminster Hospital, to whom we are indebted for many of the facts embodied in this and the succeeding paper. Pleasantly written, with much varied information, carefully eschewing on the one hand the dry monotony of the guide-book, yet always bearing in mind the main object in view, to furnish useful knowledge, Dr. Marcet's work is indeed extremely pleasant reading; and to the traveller going abroad, either for health or recreation, we can cordially recommend it for the general information that it contains. If there be a fault about the book—and of course there is—it is that the writer is, perhaps, too much inclined to linger by the way, to expatiate at undue length on what are comparatively unimportant matters, thus giving an appearance of unevenness to his book; but this, after all, is a minor shortcoming which we are gladly disposed to lose sight of in the general excellence of the work.

Of all the health-resorts of the south familiar to English people, Cannes, thanks—in a measure—to the number of distinguished men who have visited it, is probably, next to Nice, the best known. And, indeed, life at this popular French watering-place, quite apart from the inducement that it holds out to the invalid in the way of climate, is extremely pleasant work. It may not possess the bustle and gaiety of Nice, which is a much larger town, having some sixty thousand inhabitants, and boasting of horse races, pigeon-shooting matches (burly form of Mr. Anderson defend us!), theatres, roulette-tables, and what not beside, including a real live Carnival, but in its way it is every bit as enjoyable. One can dawdle away one's existence at Cannes. The days pass by you in no hot, precipitate fashion, flushing you with nervous excitement; but slowly and sedately, allowing you full time to sip their flavour, without in the slightest degree growing monotonous. And it must not be supposed that because Cannes is lacking in the more riotous festivity that distinguishes Nice, she has therefore no amusements at all. That would be a great mistake. There are many social enjoyments to be participated in; balls, concerts, private theatricals, lawn tennis parties, picnics, and other entertainments innumerable; quiet affairs for the blazé man of the world no doubt, yet to the individual who has no desire to go through life at a break-neck speed, but prefers to loiter by the way and take his pleasures, as the French have it, sadly, attractive enough. Or if the visitor be a sportman, fond of out-door exercise, he can try his hand at fish spearing, a highly picturesque (for the people on the shore) form of amusement which is carried on at night by the light of a fire of burning bituminous pine wood and coal, suspended in a metal basket over the stern of the boat, while the fishermen, weapon in hand, stand in the bows and spear their unfortunate victims as they glide by. It is perhaps hardly necessary to point out that this is a pursuit which requires considerable dexterity in manipulation, for the inexperienced sportsman is just as likely as not, if he miss his aim, to fall over the side of the boat; hence to some people the pleasure of the occupation. But there are, so far as we are aware, no gambling tables. Such a thing would not be tolerated for a moment, certainly not. Let those misguided creatures over the way, the Nicits or Nicians (or whatever you are disposed to call them), keep such sources of abomination to themselves, and much good may they derive from the possession.

To the invalid, of course, the chief consideration at Cannes is the climate. The atmosphere is much drier than in England, and there are no fogs. Absolutely wet days, as Dr. Marcet points out, are exceedingly rare, and from a table which he has drawn up, giving the results of his observations on the Riviera during eight seasons (six of which he resided at Cannes and two at Nice, where the climate is almost identical), it would appear that, on an average, not more than four or five occur from November to April inclusively. Nothing could testify more forcibly to the fineness of the weather than this. The mean temperature at Cannes during the same period is about 9 deg. or 10 deg. higher than at Greenwich; and, writing on this point, it may not be uninteresting to note, as a somewhat remarkable fact, that Cannes, owing, no doubt, to its sheltered position from the northerly winds and the immediate neighbourhood of a warm sea, has, for the three coldest months of the year, a higher temperature, by 4·3 deg., 5·6 deg., and 2·1 deg. respectively, than Florence, Pau, and Pisa, towns which occupy very nearly the same latitude.

People wintering on the Riviera for the benefit of their health, as a rule do so to avoid the cold, damp, and fogs of other localities; they either suffer from some form of lung

Snelgrove's Governor Gas Burners.—Save quarter to half the gas bill. 15s. per dozen. Samples 18 stamps. Lists free.—60, Queen Victoria-street, E.C.; and of all Ironmongers.—[Advt.]

Daylight in Dark Rooms.—Chappuis' Patents. 69, Fleet-street.—[Advt.]

disorder already or, being constitutionally disposed that way, desire to avert an expected attack. The season for such may be said to extend from the middle of October to the end of April. Any time before or after this is likely to prove injurious on account of the heat. The principal complaints for which the climate is found beneficial are asthma, bronchitis, pneumonia, and consumption; but it is not every form of these affections that the air of Cannes is suitable for, and in the more advanced stages of phthisis, when a man's days are so to speak numbered, it should be remembered that a change to the south of France is of no use whatever, and the patient might just as well remain at home. The special form of bronchitis and asthma to which the air of Cannes is adapted is the chronic, where there are no accompanying symptoms of inflammation or fever, and the disease is apparently due to a low and weakened state of the constitution; for the more acute forms, attended by greater inflammatory disturbance, loss of sleep, and nervous irritability, Dr. Marcet would be inclined to recommend Hyères, Madeira, or the Canary Islands, and, in some cases, Pau. Chronic bronchitis of a comparatively mild type is, as a rule, soon relieved on the Riviera. The cases of consumption that derive the most benefit are either in an early stage, without inflammatory or febrile conditions, or in the third stage with wasted lungs, the patient in other respects being in a fair state of health.

To the man who is in search of recreation as well as pure atmosphere—and throughout these papers we have carefully kept this gentleman in view—Nice offers many inducements. It is, as we have pointed out, a far livelier place than Cannes, and it does not possess the air of sober respectability that characterises the latter place. Saints, if we may put it broadly, would perhaps go to Cannes, sinners to Nice. As for the climate it is very much the same in both towns, and from a medical aspect what holds good of the one is equally true of the other, so that there is nothing more to be said on this point; but, if anything, Nice is perhaps rather colder than Cannes in the winter. Its amusements are extremely varied, everybody doing his best to enjoy himself purely and simply, and amongst its visitors you will find men of all nationalities, Germans, Americans, Russians, Poles, Belgians, Greeks, and English, including some of the greatest blackguards under the sun, which does not say much for the purity and simplicity of their enjoyments after all.

Immediately the name of Nice is mentioned, the vision of a long table, covered with green cloth, rises before the eye. We see men of peculiarly impassive countenance dragging to their side of the board, by means of long rakes, piles of glittering gold pieces, whilst haggard-looking victims, with deep-seated frenzy stamped on every lineament of their faces, despairingly clasp their hands to their foreheads, and rush into the gardens outside to put big leaden bullets into themselves. It is very pretty, but not true. We are inclined to think that the evil effects of the gambling-tables at Monaco have been much exaggerated. No doubt some people have been ruined by them, as some people have been ruined by almost every amusement of a speculative nature that was ever invented, but nothing like so many as the novelist and the popular descriptive writer would have us believe. Not for a moment would we be supposed, as a journal devoted to the interests of domestic health, to stand up for public gambling-tables; but there is truth in all these things or there is not. At any rate—and this is our contention—we ourselves should never keep away from Nice on this account, because they happened to have public gaming tables in the vicinity, or horse-races on Sundays, and regattas; though, for our own part, we hardly take a "hand" at cards or visit a race-course once in twelve months; and on the only occasion we assisted at a regatta we fell overboard.

INTERNATIONAL HEALTH EXHIBITION.

The great interest manifested in the Exhibition is shown by the fact that application has been made, by British exhibitors alone, for space five times as great as that actually at the disposal of the Executive Council. On the 15th of this month the first goods were admitted.

Information has recently been received that the French Government has appointed a Commission; and Italy—owing in a great measure to the individual exertions of a member of the Executive Council—will, it is hoped, take an active part.

A portion of the Educational Section of the Exhibition will be located in the Central Institute of the City of London Technical Guilds, the handsome building in course of erection in the Exhibition-road, which has been kindly placed at the disposal of the Executive Council.

The Royal Albert Hall, with its musical attractions, will now form an integral part of the Exhibition; and the Aquarium, a popular feature of the late Fisheries Exhibition, will continue as an important part of the Health Exhibition.

In the Dress Section, the most popular exhibit will probably prove to be a series which is being prepared, illustrative of English dress of all ranks of life from the time of the Conquest to George IV.

While the main objects of the Exhibition—which are to impart instruction on the principal sections of the undertaking—have received the fullest attention from the Executive Council, the amusement of the visitors has not been overlooked. The Band of the Grenadier Guards, under the able conductorship of Mr. Dan Godfrey, will, as last year, perform each day; and, actuated by the success which attended the visit of the Thuringian Regimental Band to the Fisheries Exhibition, the Executive Council have taken such steps as may, it is hoped, lead to the visit of representative foreign military bands this summer. It is also intended that concerts shall from time to time be given in the Albert Hall.

An International Congress on Education will be held, and conferences and lectures will conduce to the elucidation of the subjects of the Exhibition. It is also proposed to have a Library and Reading-Room in connection with the Exhibition, which will be open to all visitors, under proper regulations, while the Exhibition is open. The library will consist of books on various subjects comprised in the classification of the Exhibition, both English and foreign. Application has been addressed to foreign and colonial Governments, asking them for copies of reports and statistics on sanitary and educational matters, and a circular is being sent out to authors and publishers requesting them to contribute works of a similar character.

The *Caterer* gives the following recipe for producing the veritable Worcester sauce:—White vinegar, 15 gallons; walnut and mushroom ketchup, 10 gallons; Madiera wine, 5 gallons; table salt, 25 lb.; Canton soy, 4 gallons; allspice and coriander (powdered), of each ½ lb.; mace and cinnamon, of each ½ lb.; assafœtida, ¼ lb.; dissolved in brandy 1 gallon. Boil 20 lb. of hog's liver for twelve hours with 10 gallons of water, frequently renewing the water. Chop up the liver, work with the water, strain, and mix with the other ingredients.

International Health Exhibition.

LONDON, 1884.

FIFTH PAPER.

MEMORANDA FOR THE GUIDANCE OF EXHIBITORS,*

DRAWN UP BY THE SUB-COMMITTEES AND APPROVED BY THE EXECUTIVE COUNCIL.

FOOD.

THE official classification of Group 1 of the Exhibition, in which are comprised Classes 1 to 12, will be found on p. 11.

In the first three classes are included what may be termed the Raw Materials of Food. In Class 1, specimens of the actual foods themselves may, when possible, be exhibited, and when this cannot be done, they should be represented by models. The exhibition, for instance, of uncooked meat would be neither desirable nor practicable, but any exhibits tending to give information as to the various animals used for the food of man, their nature, habits, characteristics, &c., will be welcomed. In the case of cereals and other food-stuffs, the raw grain and the products from it may be exhibited. Fruits and vegetables will for the most part be represented by models, but the Executive Council are also considering the establishment of periodical shows at which the articles themselves can be exhibited and sold. Specimens of foreign fruits, &c., will be gladly received for this purpose. Models of the different fruits imported in a dried or preserved state into this country are specially desirable, in order to illustrate their natural forms.

The classification sufficiently indicates the class of exhibits desired for Classes 2 and 3. It may be added that, where possible, preserved provisions should be put up in bottles, so that they may be visible, not in tins. Not more than three specimens of each kind should be sent in.

In Class 4 are to be included every sort of drink, including milk, as well as those enumerated in the classification. It will take in all exhibits connected with the production of tea, coffee, and other beverages (except those relegated to Class 12), and all illustrating new or little-known beverages, such as Maté or Paraguay tea, Coca, Koumiss, &c.

The exhibits in Class 5 will naturally also be capable of being placed in one or other of the previous classes, but this arrangement has been adopted with the view of giving prominence to any novelties. Food for children and invalids will form a special feature in this class.

As regards Class 6, the Committee think it well to draw attention to the announcement already made by the Executive Council, that, as refreshments come within the scope of the Exhibition, all methods of preparing the same, whether by cookery or otherwise, and the display and sale thereof, will be matters of separate arrangement with those wishing to be represented in this section.

One principal object to be kept in view in this department of the Exhibition will be the diffusion of information as to the economical cooking of food, and the best way of utilising the various kinds of food available to this country. Cheap cooking, both at home and by means of public kitchens, should be amply illustrated. For the purposes of comparison there should be illustrations of every class of foreign cookery, not only of the luxurious sort, but of that practised in the homes of the well-to-do, of the middle-class, and of the poorer classes, in foreign countries. As a matter of interest, and with the object of diffusing information on the manner of life of nations differing yet further from ourselves, the Committee hope that means may be found for Exhibiting the practice of Eastern cooks, Chinese, Japanese, Indian (Mohammedan and Hindoo), &c. Bakeries will be included in this class, and the Committee hope that the fittings and appliances of the most modern establishments (both English and foreign) may be fully shown.

The object of Classes 7 and 8 is to diffuse popular information as to the nature, constituents, uses, and adulterations of food. Exhibits illustrating these and similar points will be welcome. The Committee trust that the Science and Art Department will assist this portion of the Exhibition by lending and supplementing one of the collections formed by Professor Church.

As regards the last item in Class 8, it should be noted that parasites or other organisms injurious in any way to food or its sources are included.

As regards Foreign Dietaries in Class 9, the Committee consider that this expression must be taken in its widest sense, and as including the food of savage races all over the world. It would therefore comprise specimens of the animal and vegetable substances used as food, beverages, stimulants, &c., by savages or native races of low civilisation, both in the raw and prepared condition, together with appliances and utensils of all kinds used in their manufacture or consumption. Models and drawings illustrative of the subject would also be desirable. As examples may be mentioned sago, and its native manufacture, by Malays, natives of New Guinea, &c.; cassava, and its manufacture in British Guinea; taro, the Polynesian food, and the manufacture of roi from it; kaava and kaava bowls of Fiji and elsewhere. The Committee hope that the materials for a valuable ethnological collection of this sort will be forthcoming from private owners in England.

The exhibits admissible to Class 10 are clearly indicated in the classification.

Classes 11 and 12 are added as separate classes because it is necessary that all machinery should be placed together in one gallery where the motive-power is provided. Among the processes which the Committee hope to see illustrated may be mentioned methods of cold storage and transport of fresh meat, ice-making, dairy operations, the preservation of food, making bread, biscuits, &c., the manufacture of confectionery, of condiments, of cocoa and chocolate, and the production and bottling of aërated waters.

* Communications relating to the following memoranda should be addressed to "The Secretary, International Health Exhibition, South Kensington, London," and marked on the envelope for the Sub-committee to which it refers.

Sanitary Appliances, Etc.

CHLORALUM.

WE have received samples of this well-known disinfectant, and have pleasure in directing the attention of our readers to its efficacy. Experiment has proved that chloralum is a powerful disinfectant, possessing no smell, and likewise the additional and immense advantages of being cheap and non-poisonous. Scientific opinion has pronounced that chloralum is most effective in removing and destroying disagreeable odours and effluvia at large. It is not volatile, and therefore does not disinfect the air; but as an application for the disinfection of clothing and rooms by washing, chloralum has few rivals. The various preparations of chloralum are well adapted for all purposes where disinfectants are likely to prove useful. The liquid itself possesses, in addition to its disinfectant uses, valuable properties as a lotion, and may be used with success as an application to wounds, sores, and as a corrective to discharges of all kinds. In the form of powder, chloralum can be used as an application to drains and in closets. The chloralum tooth-powder is astringent, and has a healthful action on the gums, while the chloralum wools form useful applications in surgical dressing. We have also pleasure in noting chloraline, which as a liniment has valuable properties, and may be applied with success to the cure of chilblains and like conditions.

AGREEABLE DISINFECTANT FOR ROOMS.—The following, quoted in *Phil. Med. Rep.*, from an Italian Journal, is recommended as a pleasant and efficacious disinfectant for sick rooms:—Camphor, 20 parts; hypochlorite of lime, 50 parts; alcohol, 50 parts; water, 50 parts; oil of cloves, 1 part; oil of eucalyptus, 1 part. The ingredients should be mixed slowly in a cool, spacious vessel, and a few drops on a plate placed in the rooms.

NEW FORM OF ARTIFICIAL MILK.—It is stated that a new preparation of artificial human milk is to be brought shortly before the public. The ingredients of which it will be composed are set down as follows:—Fresh cow's milk, 1 pint; skimmed milk, ½ pint; hot water, ½ pint; sugar of milk, 1 ounce. The sugar of milk is dissolved in the hot water, and the solution mixed with the other ingredients. It is asserted that this is the nearest approach to human milk attainable; and, according to Dr. Davies, the addition to the above quantities of ten grains of carbonate of soda would prevent it turning sour, and render it more digestible. If obliged to be dry-nursed, an infant, it is said, would thrive on this milk for the first seven or eight months of its existence. It is this compound artificial milk that it is proposed to manufacture in a condensed form for the use of the public.

Our Letter : Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 74-76, *Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to* "The Publisher," *at the same address.*

Contributors are requested to send stamps for the return of the MSS. *in event of non-acceptance. Every care will be taken to ensure the safety of* MSS., *but the* Editor *and* Publishers *cannot hold themselves responsible for accidental loss.*

Correspondents are requested to write on one side of the paper only. The Editor *disclaims responsibility for the opinions expressed by Correspondents.*

[Important to Correspondents.—We have again to call attention to the fact that, while every effort is made week by week to deal with the enormous mass of correspondence which reaches us, we cannot undertake to answer queries save as space permits. All queries are attentively considered and replied to, but in no case can any query be answered in the same week as that in which it is received.]

[A number of replies have been crowded out of the present number owing to pressure in space. These replies will be duly given next week.]

GENERAL.

Oxon.—There is no difference, we believe, between the two plans.

A. Bailley.—All in good time. We intend to have articles on the influence of railway travelling on health. The *Lancet*, some years ago, issued a special series of articles on this subject.

Canton, J.—We believe the percentage is about twenty.

Anthony.—The rate at which nerve force travels is much slower in cold-blooded than in warm-blooded animals.

Tempus.—The broad-headed tape-worm to which your refer is probably derived from fishes. It is not met with in inhabitants of this country.

J. Aitken.—The microscope cannot at present distinguish between the red blood globules of man and those of our common domestic animals.

G. Thomas.—Dr. G. Wilson's "Handbook of Sanitary Science,' or "Manual of Hygiene," published by Messrs. Churchill, London, is the book you require. Corfield's "Laws of Health," 1s. 6d. (Longmans), is also a capital little book.

Bangor.—Cassell's "Family Physician" contains all the information you seek. Write to Messrs. Cassell for a catalogue.

Nom de Guerre.—Appears to mean "alum and borax ten grains," or "borax of alum ten grains." Your letter does not make clear which."

G. E. N.—Apply to Messrs. Bostel, 23, Charing-cross, and see Mr. Bostel. Explain your views to him, and probably he may take up your invention. You want a manufacturer who will push your invention, if we understand you aright.

F. H. Williams.—Read the chapter on "Rudimentary Organs" in Darwin's "Origin of Species." See chapter on same subject in Dr. Andrew Wilson's "Chapters on Evolution (Chatto & Windus); and read an article by Dr. Wilson on "Human Resemblances to Lower Life" in *Longman's Magazine* for last year. Mr. Darwin has also interesting details on rudimentary parts in man in his "Descent of Man." Glad to be of any further assistance.

Alchemist.—The following is a formula for a "Fruit or Food Salt" likely to suit you:—2 oz. each of carbonate of soda, tartaric acid, Epsom salts, and cream of tartar; ¼ lb. pulverised sugar. Mix well, and keep in a tight-stoppered bottle. It is aperient, and cooling in its action.

SANITARY.

Gasometer.—The fumes of which you complain are held to be injurious to health. How near is your house to the road or place of deposit? Do you experience inconvenience in your house from the fumes? If not, your only remedy would be indictment for a public nuisance. Everything depends upon the amount of inconvenience you experience. How long has the practice been in existence?

Ormond.—The date of the Canal-Boats Act is 1877.

Aqua.—Any dealer in sanitary apparatus could provide you with a cistern waste-preventer. Those for closets should hold about two gallons each.

Sola.—The presence of the minute crustaceans, commonly known as water-fleas, is incompatible with the purity of water.

Abel G.—Milk is highly susceptible of absorbing gases and other matters. It should never be stored in lead or zinc vessels.

G. May.—Thanks for your letter and specimen. What you describe is simply disgraceful. We shall note what you say for future use.

MEDICAL.

G. T. B.—We should recommend you to live for a time on milk, soups, and other nourishing fluids, so as to give your stomach complete rest. It appears to us that you are highly nervous. For piles use the following:—*Tincture of Hamamelis*, a teaspoonful added to an eight-ounce bottle of water. Take two teaspoonfuls every three hours. As a lotion for external application, two teaspoonfuls of the tincture should be added to a half-pint of water and applied several times daily on lint.

A. T.—Spinal irritation is a general term including a variety of ailments. You must specify more particularly your symptoms. Stimulants should not be taken in such cases.

Bob.—*Fer Bravais* is a blood tonic. Any druggist will inform you of its price.

Nimrod.—See advice to "G. T. B." in present number. You would find immense benefit by trying the experiment of a vegetable dietary, instead of tampering with aperients. Constipation is the most frequent cause of your ailment. Glad to be of any further service.

J. O. T.—You suffer from a form of skin irritation, possibly caused by chill and digestive complaints. See to your general health and take more open-air exercise, and try the following:—Sulphide of lime, 24 gr.; sugar of milk, ½ oz. Mix. Keep in a stoppered bottle. As much as will cover a sixpence to be taken every four hours. The face might be smeared with pure Vaseline at night.

A Housekeeper Twenty-four Years.—In the case of poisoning by red lead, to which you refer, the illness did not arise from the people drinking the water from the kitchen boiler, but from using the water for cooking purposes. Nothing was said in the paragraph about the water being used for drinking.

Bull's-eye.—You say nothing about your work, but from your letter we suspect you are over-worked. Your remedy is rest, together with a little tonic medicine, such as *Fer Bravais*, 15 drops, thrice daily, in water. You had better leave off smoking for a time.

M. Hawford.—What you complain of consists of an affection of the little openings of the glands of the skin. Wash carefully with tepid water and Pears' soap. Try a vegetable dietary and the lime powders prescribed to "J. O. T." in present number. Your skin troubles are probably due to some slight derangement of your general health, and your letter shows us as much. If not cured, write again.

Daisy.—Asthma is an ailment which depends very materially on the state of the general health. Your food should be very light and, in addition, you might take with it some Morson's "Pepsine." When you are troubled with an asthmatic attack, the following may be useful:—Tincture of lobelia, two drachms; spirits of chloroform, three drachms; tincture of conium, three drachms; almond mixture to make up six ounces. A dessert-spoonful thrice daily. Probably a change of air might relieve your symptoms.

T. Taylor.—The ointment to which you refer is somewhat complex in its nature; we should advise you, instead, to use a lotion composed of one part Friar's Balsam and twenty parts rose water for the face.

Miss J.—In such a case as yours we think you would derive most benefit from a consultation with a physician, who would lay down a series of rules for diet likely to benefit you. Potatoes will do you no harm, but a physician, after an examination, would prescribe remedies likely to relieve your joint troubles.

Camp.—We do not know the composition of the restorer you name. Have you tried Rowlands' Macassar oil (the pink variety) as an application? Any restorer which will produce change of colour, is almost certain to contain lead.

Inkstand.—The secretion is merely one from what are called the sebaceous glands of the skin. Wash night and morning, and apply a little pure Vaseline. There is no disease.

Tricycle.—An article on tricycling by Dr. Richardson appeared in *Longman's Magazine*. Varicose veins may exist without any heart disease, but your best plan would be that of undergoing a thorough examination by a competent physician, who would advise you as to the necessity of wearing an elastic stocking. We do not think you should "tricycle" without obtaining in the first instance a medical opinion.

F. G. W.—As, in our opinion, your ailment depends on want of tone, take a teaspoonful of Fellows' "Syrup of the Hypophosphites," thrice daily, before meals, in a wineglassful of water. Let us hear how you are in a week or so after taking this tonic.

H. T. W.—No; do not continue tonics, so as to become dependent on them. You should try cod-liver oil and iron for a time—a dessert spoonful after every meal. Thomson's "Cod-liver Oil Cream" (see our advertising columns), in which there are contained substances likely to benefit you, should suit you. Let your food be nutritious.

G. H. F.—Try soaking the feet in a solution of alum and water. Paint the lumps with tincture of iodine, and rest as much as possible.

E. W.—Look to your teeth. (See advice to "Dens" in Health No. 48.) Try the effect of a vegetable dietary in part, and let your food be light, but nourishing. Take a little "Pepsine" with your meals as an aid to digestion; and you may also benefit from a little more open-air exercise. If not better, write again.

W. Smith.—Don't be alarmed. Use twice or thrice daily an injection of a little "Condy's Fluid" in tepid water—sufficient Condy simply to colour the water of a pale purple; and take also ten drops *Fer Bravais* in water thrice a day. Rest as much as possible. Give up all other medicines.

Inquirer.—Use the hair-lotion recommended to "Russell," in No. 48 Health. Your hair will grow again by attention thereto. Use a soft brush, and wash the head once a week with Pears' soap and tepid water.

T. W. H.—See and follow advice to "Dunedin," in No. 48 of Health. Persevere in this treatment and you will get quite well. Rest as much as possible.

Foxglove.—Regarding the mixture you were ordered, and the comparative infrequency of its use, we see no reason to think any "cumulative" effects can accrue. You have been needlessly alarmed. Our recommendation to you is simply rest, avoidance of exertion (sudden), and attention to general health. Many so-called "heart" troubles really arise from the stomach.

J. S. T.—Look to your teeth (follow advice given to "Dens," in Health, No. 48). See that your food is light and thoroughly digested. Give up tea and coffee, and don't eat late at night. Take a little "Æsculap" mineral water occasionally, as a mild aperient, in the morning. Write again if not cured. A charcoal biscuit or two may assist your cure.

Nemo.—Use a lotion consisting of bicarbonate of soda, one drachm, glycerine 1½ oz.

Rednaxela.—Don't be morbid. By your own account you suffer from no disease; but if you think you want toning, read and follow advice to "Dunedin," in Health No. 48.

S. E. R.—No cure for blushing. As a tonic for your general health try the pills recommended to "T. Y. C." in Health, No. 48. Rest as much as possible, and don't bicycle until you are thoroughly well. Try a mixture of glycerine and rose-water for scurf. For sprains, rest and hot fomentations, with cold water treatment after inflammation has subsided.

A Recommender of Health.—Eat nutritious food, take active exercise, and take cod-liver oil daily after food, during spring and winter. The cod-liver oil will relieve your other symptoms; and your druggist may add a little syrup of iodide of iron to the cod oil with advantage to you.

Anxious Mother.—We should give the children cod-liver oil after food regularly all spring; let them drink plenty of new milk, and food generally to be nutritious. Iron added to the oil (see answer to previous correspondent) would also do good. Should no improvement appear after this treatment, let the children be thoroughly examined by a medical man. No physical exercises are permissible till the children are thoroughly well. What is your family history and that of the father?

Franco.—Use a little carbolated Vaseline ointment as an outward application, and take internally the lime powders ordered to "J. O. T." in present number of Health. Write again if not bettered.

W. Collins.—You were replied to in No. 49. We cannot guarantee an early reply, owing to the mass of correspondence, which requires assortment.

Un Misérable.—Don't be morbid. Read and follow advice to "Dunedin" in Health, No. 48. You suffer from no disease, and will get quite well by attention to advice indicated.

Beta.—Yours is a hard case, but your ailment will not cease until you can make some change in your diet and life. You want more exercise and fresh air. We know what the food too often is, in such establishments. Why not seek a country situation? A little "Æsculap" mineral water taken occasionally in the mornings will act as a mild aperient. You are quite well as regards the so-called "debility," so don't let that prey on your mind.

H. B.—No doubt your mental worry is at the root of most, if not all, your troubles. Why not try milk, light nourishing soups, Brand's Beef Essence and like preparations for a time, and give your stomach rest from digesting solids? A little Pepsine taken with the food should do you good. You are evidently not a subject for ordinary tonics, and your treatment must be largely dietetic. Give our advice a trial (not so many Turkish Baths), and if not improved, write again.

Setay [or Setan, or Lebay, Leamington].—You signature is highly indistinct, and you have yourself to thank for overlooking your reply. You were replied to in No. 48 Health, under the name of "Lebay."

F. K.—Try the effect of pure Vaseline applied nightly (and thoroughly) to the inside and edges of the lids. Use a little of a lotion by day, consisting of six ounces rose water and six grains sulphate of zinc. Use lotion, say half wineglassful to same quantity of water. If not improved, write again.

Dyspeptic.—You suffer from confined hours and overwork also, probably. We would say to you, more fresh air and less close air (and gloomy fancies). You are nervous, and inclined to despond. Let your food be light and nutritious (see advice to "H. B." in present number, and follow same with regard to food). Glad to be of further service. The pills recommended to "T. Y. C.," in No. 48, should be of service to you. We can only send addresses of medical men on receipt of stamped addressed envelope. The bark you name is a simple remedy, but has no lasting effects.

Juvenis.—You complain of being too youthful! Most persons would like to have "half your complaint." If you think it a "misfortune" to look five years younger than you are, buy a grey wig, and wear spectacles. Why, and how, do you find your juvenile appearance "distressing" and "disadvantageous" to you?—and you only twenty-two years of age!

Eye.—Simply see that your child's health is attended to. Divert her from squinting by seeing that her hair in front does not get into her eyes, and by attention to the eyes generally. Later on, even if she does squint, a simple operation will remedy that. She is too young for any interference yet.

Alpha.—See that your truss fits you, and that it is properly made. For the other symptom of which you complain, wear a suspensory bandage, and bathe with cold water. A surgeon will advise as to truss, &c. Avoid violent exercise and strain.

Galatea.—Yes; all decayed teeth should be removed, and a good artificial set made. The "gas" is safe in the hands of a good dentist. Good digestion begins with good teeth. For thread-worms give the children the following powder (after a dose of castor-oil): santonin, two grains; scammony powder, three grains.

A Medical Student.—See our articles in past numbers of Health on "How to Get Thin or Fat," also an article on "How to Get Thin," in Health, No. 45. It is dangerous to trifle with unknown drugs. A course of diet is the best remedy. Some persons are constitutionally stout, and in such cases it may be impossible (and unwise) to effect violent reduction of body. Read Banting's pamphlet, to be had from Harrison, Pall-Mall, S.W.

Hyderabad.—1. No; the actions are quite different. The one is a tonic, the other a depressant. 2. No; nothing like that quantity. Try the tonic (Fellow's) in half-teaspoonful doses in water twice or thrice daily, and let us hear how you are after a short trial of this advice. Glad to be of any further service.

J. Arbuthnot.—We do not think there is any such danger as you may suppose. Persons have swallowed dozens of pins and needles, and have yet lived to old age. We should recommend giving a diet consisting of dough puddings, cheese, &c., and other binding matters for a short time. Such a course may be effectual in dislodging and carrying away the foreign body.

George.—You appear to be simply in want of a tonic. Try a teaspoonful of Fellow's "Syrup of the Hypophosphites," in a wineglassful of water, thrice daily, before meals, for a short time. Take more open-air exercise, and don't be morbid. No stimulants for a time, at least.

A. Waller.—If you were not replied to in Health No. 49, please restate your query. See announcement to correspondents at head of "Queries and Answers" in present number.

G. D. T.—By all means take the sea voyage. It will give you something to think about, brace you up, and cure your morbid fancies. There is nothing the matter with you. Use cold sponging, sleep on a hard mattress, and avoid fluids late at night. Take plenty of open-air exercise, and 15 drops *Fer Bravais*, thrice daily, in a little water.

Caxton.—See advice to "George," above.

Ignoramus.—See advice to "A. Spencer," in Health No. 48, as regards inhalation and iron tonic (10 drops tincture of iodine to pint of hot water at 150 deg. F.). Let your food be light and nourishing. If possible, try change of air.

Henry.—Arrange to dine when business is over. Take a light lunch. Rest after food—this is highly important—and take Morson's "Pepsine" for a time with your food.

[*Continued on page* 400.

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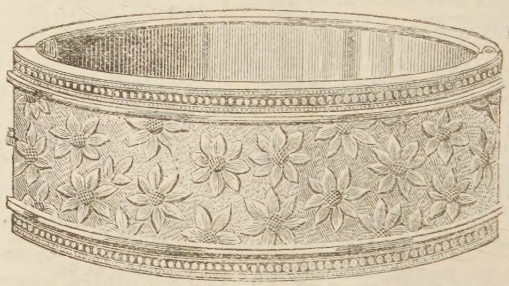

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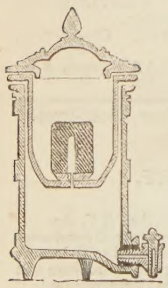

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